



Pacific Energy Partners, L. P.

California Energy Commission Crude Oil Infrastructure Workshop

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Sacramento, CA
June 28, 2004



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Pacific Energy Partners

- Publicly traded master limited partnership (PPX: NYSE)
- Operate crude oil pipelines in California, Rocky Mountains and Canada
- Operate both common carrier and proprietary systems
- California operations in San Joaquin Valley (SJV) and Los Angeles Basin
 - SJV area – gathering and blending
 - SJV to LA – two common carrier pipelines
 - LA Basin – storage, distribution and marine receipt (Port of Long Beach)
- Developing a deep water liquid bulk terminal in Port of Los Angeles



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Pacific Team – Related Experience

- **David Wright – Executive V.P.** – Has been promoting Pier 400 for several years – Extensive experience in Los Angeles Basin with crude oil and product pipelines and terminals since 1970. Has worked for Conoco,Phillips, GATX, and Tosco.
- **Dominic Ferrari – Senior Director** – 25 years experience with Unocal Corporation, California and Worldwide. Built similar marine facility in Texas and operated terminals in Central California and Alaska.
- **Art Diefenbach – Operations V.P.** – 20 years experience with ARCO Corporation. Construction Manager for BP 121 Terminal in Long Beach
- **Mark Reese – Director Environmental** – Responsible for permitting the BP 121 Terminal in Long Beach



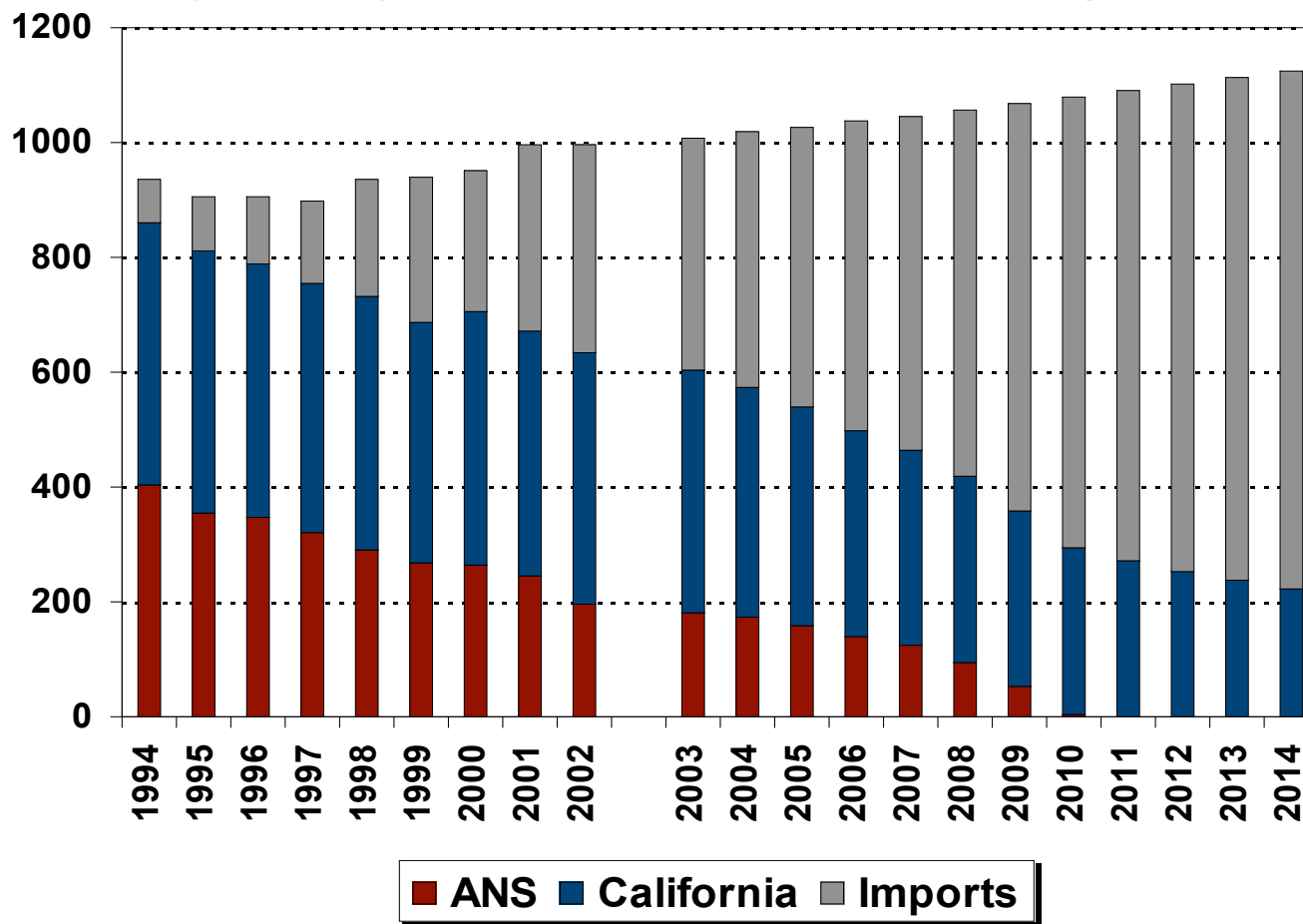
California Petroleum Supply Issues

- The supply/demand is well known to the Commission
- California is simply running out of oil
- Substantial crude oil imports will be necessary
- Current facilities in both the Los Angeles and San Francisco Bay areas are inadequate
 - Limited berths (many have been taken out of service)
 - Limited tankage (both over all quantity and service)
 - Older, shallow depth berths
 - Limited overall capacity
- Cost for new infrastructure is high
- Permitting is difficult, costly and very time consuming



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Southern California Crude Oil Supply by Region 1994 to 2014 (MBPD)



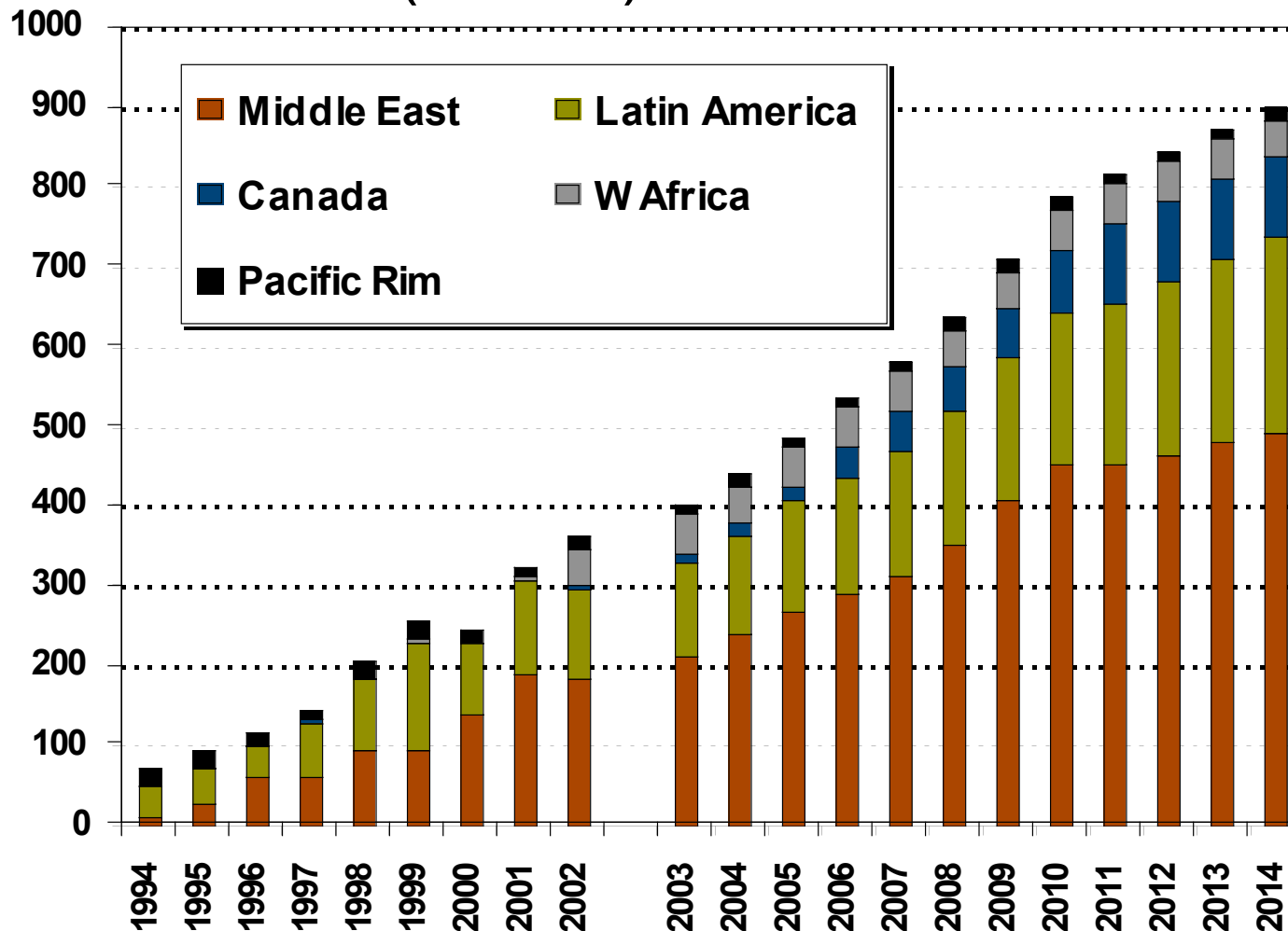
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Southern California Imported Crude Oil Supply 1994 to 2014 (MBPD)



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Key Los Angeles Area Infrastructure Issues

- Limited number of berths
- Marine receipt tankage inadequate
- Limited water depth for large marine vessel
- Limited facilities for high pour and high viscosity crude



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Los Angeles Area Berths

Facility	Port/Area	Year Developed	Depth
BP/ ConocoPhillips	POLB Berth 121	1969	76'
BP T-2	POLB Berth 76 -78	1955	41'
Shell	POLB Berth 84-86	1967	52'
ExxonMobil	POLA Berth 238	N/A	37'
Chevron Texaco	Offshore El Segundo	1992 (Upgraded)	51'



Berths

- There have been 5 berth closures in the POLA since the mid 1980's
- With exception of BP/ConocoPhillips Berth 121 in Long Beach, berths are older and limited in depth and size of vessel
- Several berths are in interharbor which limits size and types of vessels
- Age of berths impacts the functionality of berths



Marine Receipt Tankage

- Very limited amount of tankage available to integrated majors
- Independent refiners depend on 3rd parties for access to marine vessels
- More marine receipt tankage is necessary
- Key drivers for additional tankage
 - Distance from production fields to refineries – much longer transit times
 - Crude from all over the world
 - More crude types and need for segregation



Water Depth

- Water depth is very important to transportation economics
- Majority of imported crude will come from the Persian Gulf – 35 to 40 days of transit time vs 7 days from Alaska
- POLB Berth 121 can handle up to 76 feet and must rely on lightering for large VLCCs
- With 81' POLA Pier 400 will handle up to 350 to 375 MDWT vessels – 2.5 million barrel cargos – no lightering required
- Deeper water depth provides considerable transportation savings for Persian Gulf oil



Import Impact on Berth and Tankage Needs

- Over the past decade water borne crude oils were mainly from Alaska, Mexico, South America and other areas with relatively small cargos
- With decline of Alaskan and California crude production, bigger cargos of various types of crude oil will arrive from a variety areas in the world, including Persian Gulf, Canada, West Africa, and the Far East
- Bigger cargos and more segregations will create a demand for more “marine receipt” tankage
- More volume of oil in increased numbers of ships will require additional berth and receiving capacity
- Physical characteristics of crude oil such as gravity, sulfur, acid, pour point, viscosity, and metals will impact transportation, storage and area distribution needs



Refinery Considerations

- The Los Angeles area has a number of refineries with a variety of capacities and processing capabilities
- Each refinery has made significant investment to process certain types of crude oils
- Past capital investments provide economic advantages for different types of crude oils
- Refiners have invested considerable capital to be able to provide CARB Phase III gasoline and diesel and more investments are needed for future fuels
- Refineries are not able to or likely to make additional significant capital investments to change crude types
- A variety of different types of crude oils will be required in the future to economically replace Alaskan and California types of crude oils
- Cost of oil and feedstocks has a major bearing on the crude oil import infrastructure needs of the future



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Port of Los Angeles - Pier 400 Project

- In early 2004 Pacific Energy announced the development of a new deep water liquid bulk terminal at Pier 400 in POLA
- New berth would have 81' of water depth for VLCCs
- Up to 4 million barrels of tankage
- Pier 400 expected to cost \$130 to \$160 million
- No one company willing to make the commitment alone
- Valero has committed to 50,000 barrels/day for 30 years
- Discussions are under way with other integrated major oil companies and local independent refiners
- Several major producers are interested – Persian Gulf, Canada, and South America
- NEPA/CEQA has started with 1st public scoping on July 8th
- NEPA/CEQA expected to take 15 to months
- Construction will take 12 months after permits secured



Permitting Process

- SCAQMD permit to construct – offsets required for vessel emissions and other considerations
- Considerable investment for emission offsets and mitigation equipment
- Air Quality is a key issue with POLA area communities
- EPA, CARB, SCAQMD issues with overall control of vessel emissions
- Application of “cold ironing” concepts to all harbor traffic
- Local community involvement in permitting process
- Recognition of local community concerns



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Design Considerations

- Pacific is committed to building a world class facility that will adhere to the highest standards of safety and security
- Design in accordance with
 - United States Coast Guard
 - California State Lands Commission
 - Army Corp of Engineers
 - Port of Los Angeles
 - And many other agencies
- Pier 400 is the most remote area of the port complex ensuring that the facility will be located as far from residential areas as possible
- Pier 400 was designed for easy navigation and avoids traffic in inner harbor areas
- Vessels which do not meet accepted safety standards will not be allowed to call at Pier 400



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CEC Considerations

- Major energy issue for California and SouthWest U.S.
- Focus on barriers to projects
- Recognition of the great need for this project with sensitivity to local community concerns
- AB2042 – No net increase in air emissions